Unit 05 – Data Modelling

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Learning Aim A2 – Spreadsheet Features to Support Data Modelling

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A2.1 Entering and Formatting Data

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Learning Objectives

To be able to understand how to enter data into a spreadsheet.

To be able to use the range of formatting tools available.

To be able to conditionally format data using the wizard.

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What is A Spreadsheet?

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What is a Spreadsheet?

A spreadsheet is a program designed to store and process data in rows and columns.

Typical spreadsheet programs are Microsoft Excel or Google Sheets.

A cell is a small grid containing your data. It is also called a ***Field***.

By clicking on the cell, you can enter data into it.

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What is a Spreadsheet?

To use a spreadsheet, you need to know the important keywords.

Cell – the place where you want to enter data. Also called a ***Field***.

Row – the horizontal location of your cell identified by Letters.

Column – the vertical location of your cell, identified by Numbers.

Cell Reference – the row and column location of your cell identified by a Letter ***and*** a Number.

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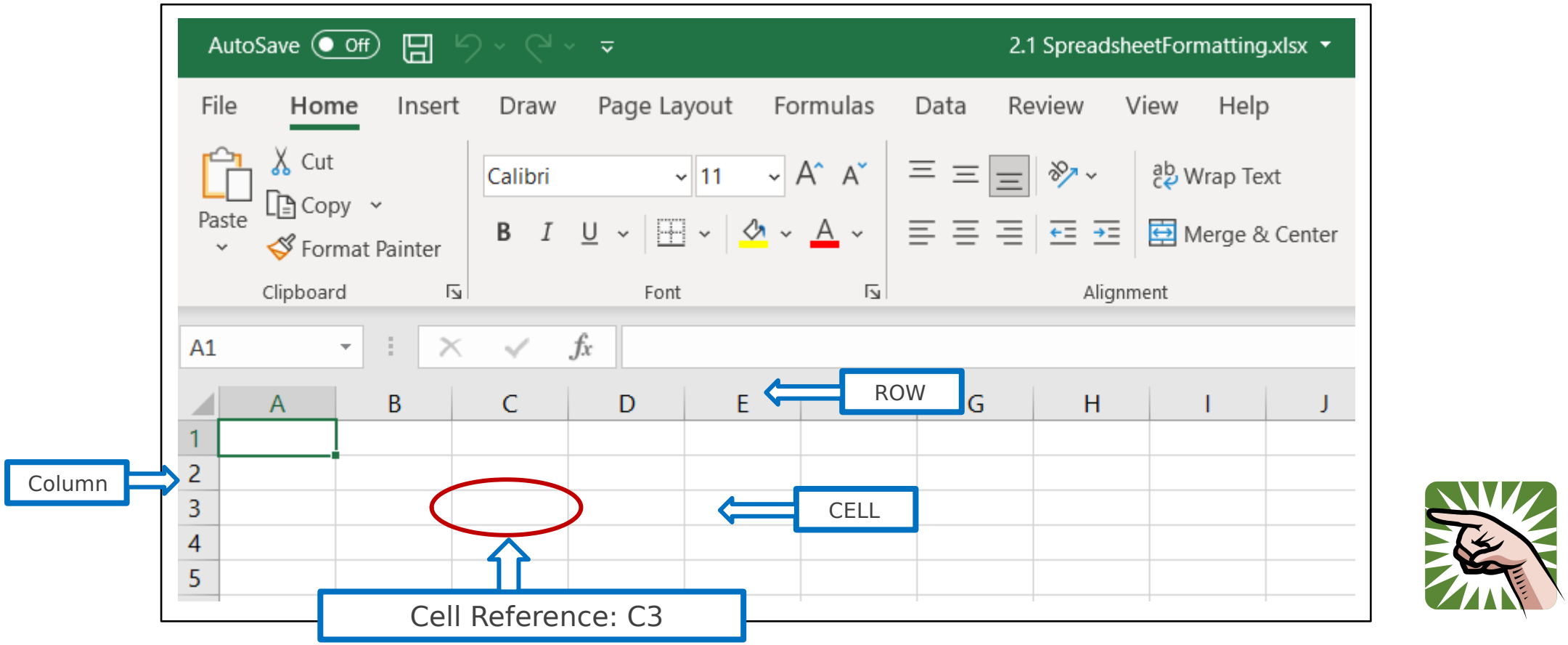
What is a Spreadsheet?



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Entering Data Into A Spreadsheet

- To enter data, click on the cell where you want to put it.
- The cell will have a dark box around it, indicating the cell is in edit mode.
- You can then type in anything you like.
- Once you have finished, you need to click outside the cell.
- This will tell the spreadsheet that you have finished editing.

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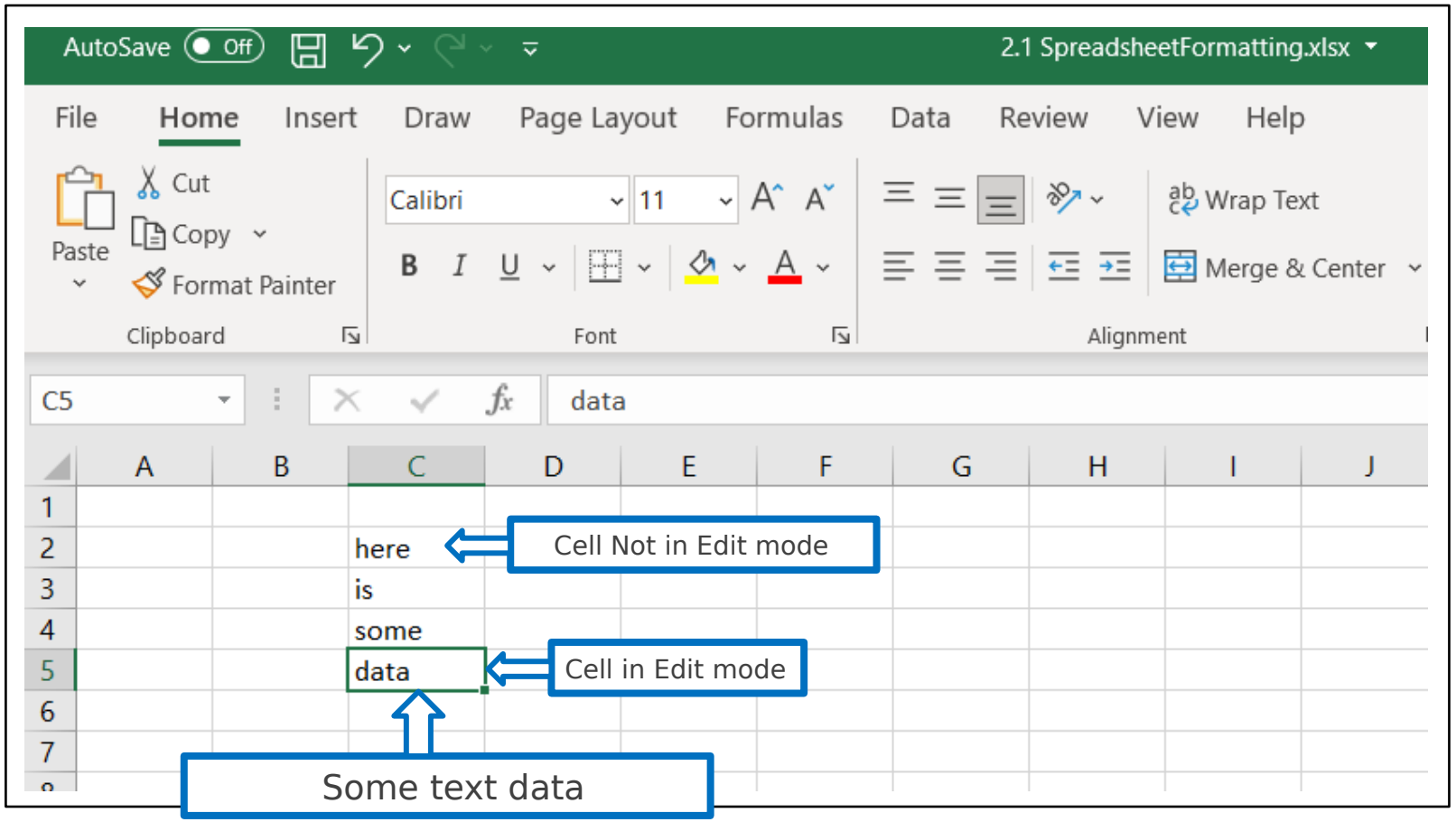
Entering Data Into A Spreadsheet



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How Are Spreadsheets Organised?

A spreadsheet is organised as a workbook.

Each workbook can contain one or more worksheets.

It is possible to load data from one worksheet into another.

We will see how to do this later in the course.

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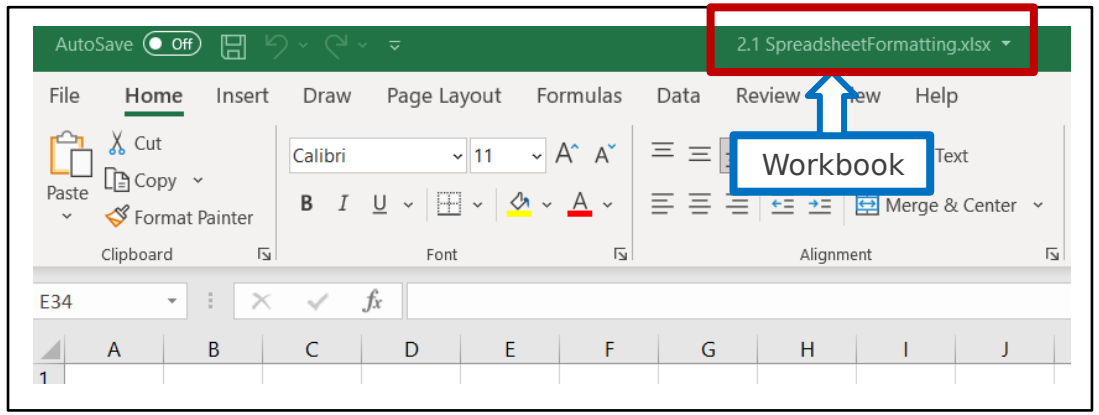
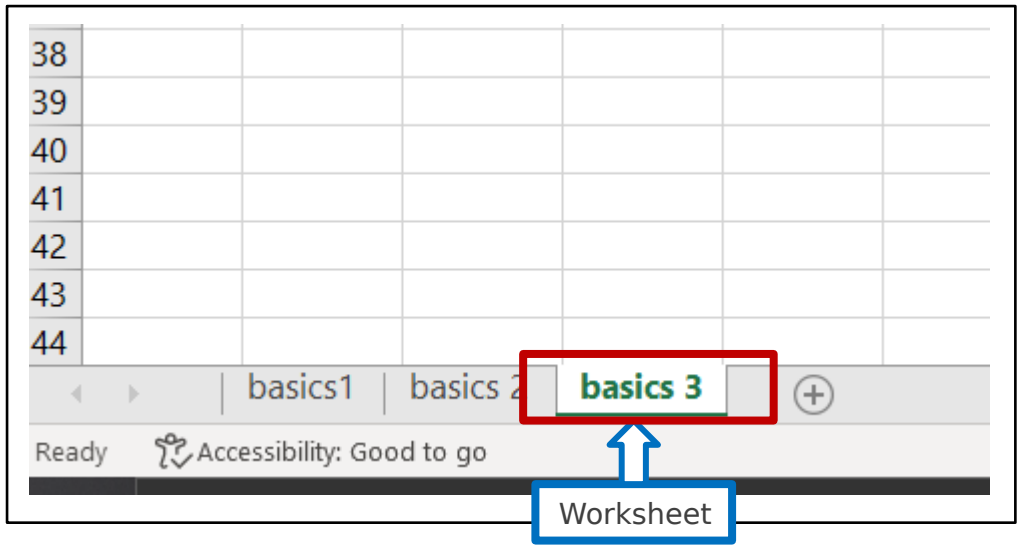
How Are Spreadsheets Organised?

ONE WORKBOOK...



...MANY WORKSHEETS



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Enter a Sequence of Data using Autofill

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How to Enter a Data Sequence

If you have a sequence or series of data values, Excel can work out what your series is.

It can then automatically fill out the series for you.

This process is called ***AUTOFILL***.

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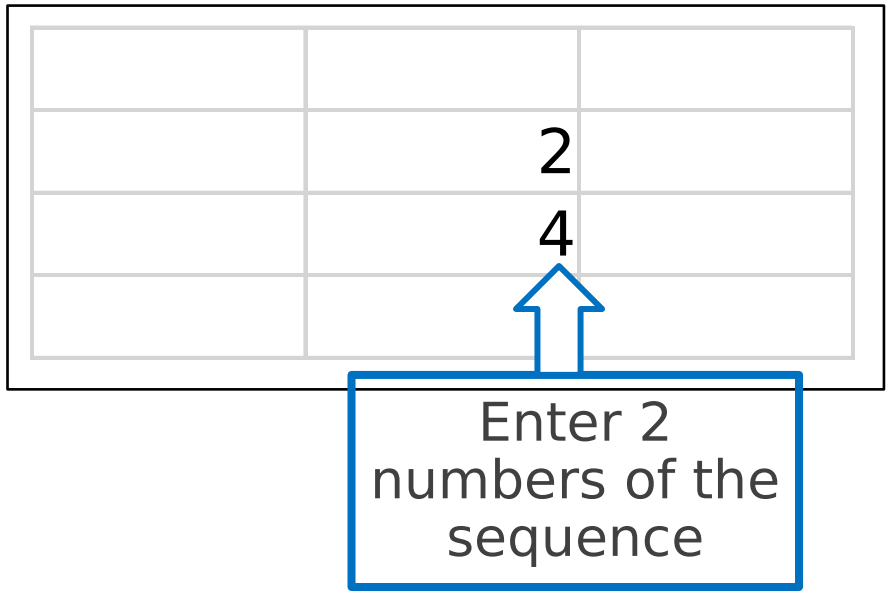
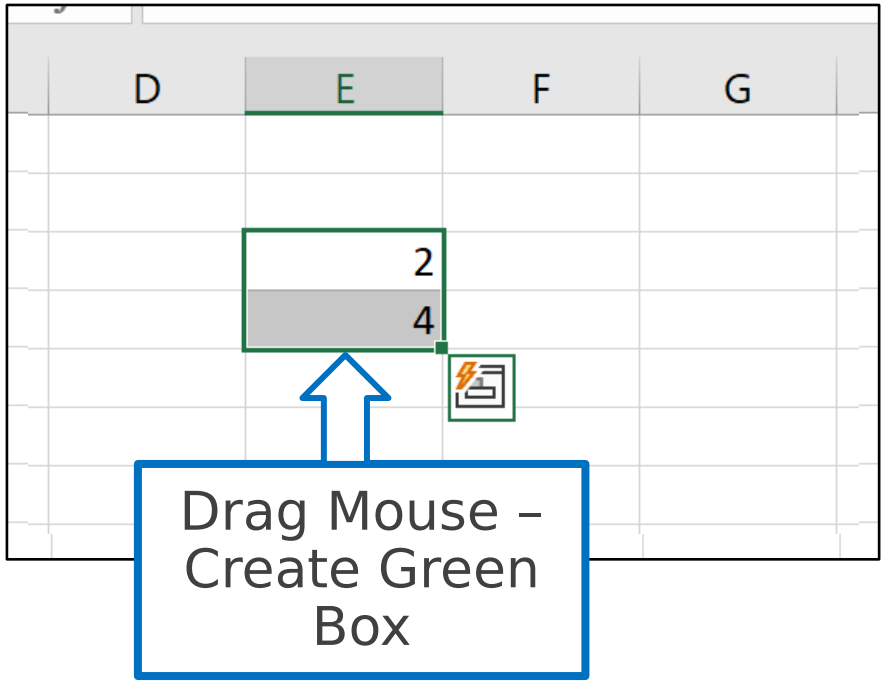
Create an Even Number Sequence 2 - 16

ENTER THE NUMBERS 2 AND 4 INTO DIFFERENT CELLS



DRAG YOUR MOUSE AROUND BOTH BOXES



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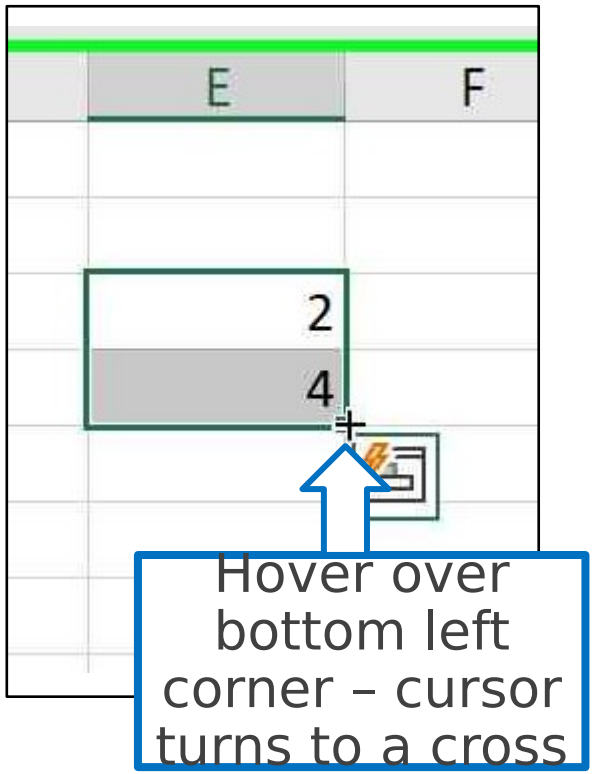
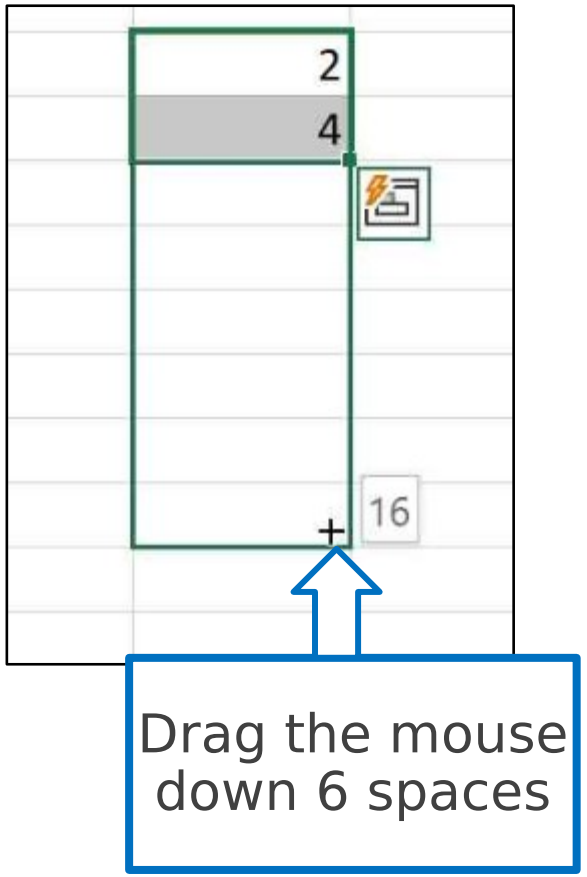
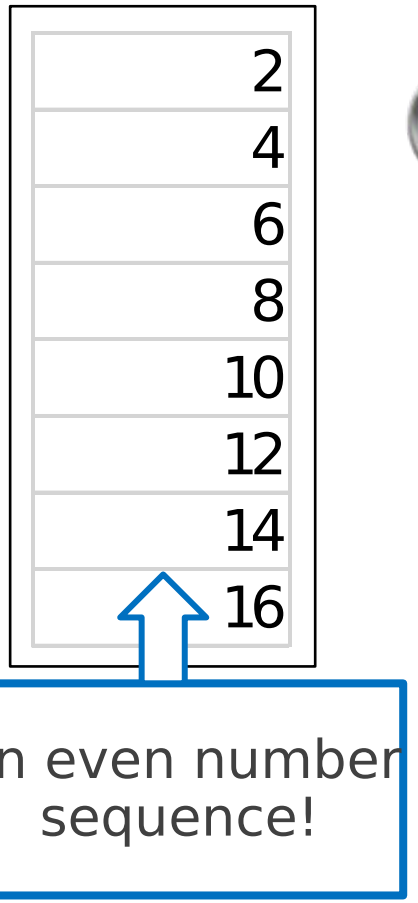
Create an Even Number Sequence 2 - 16







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Complete Process – Autofill Video

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Class Activity - Autofill

- Create an autofill sequence for the following:
- The odd numbers 1 – 15.
- The days of the week.
- The months of the year.
- Multiples of 20 up to 400.
- **TIME ALLOWED: 10 minutes**

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How to format data in a spreadsheet

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What is formatting?

- Formatting is the process of changing the appearance of your spreadsheet.
- This could make the spreadsheet easier to use.
- It could highlight important sections of the sheet.
- It could group the sheet into functional areas.
- There are a range of formatting tools available to you.

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Formatting Options

To access the formatting menu, select the cell you want.

Right click and press ‘Format Cells’.

You can then select the options that you want.

There are also shortcuts on the main menu bar.

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Cell Shading

This allows you to change the colour of a cell.

It is useful for grouping areas of a spreadsheet that have functions in common.

It can be used to indicate areas of data input and output.

Select ***FILL*** on the formatting options dialog box or use the shortcuts on the main toolbar.

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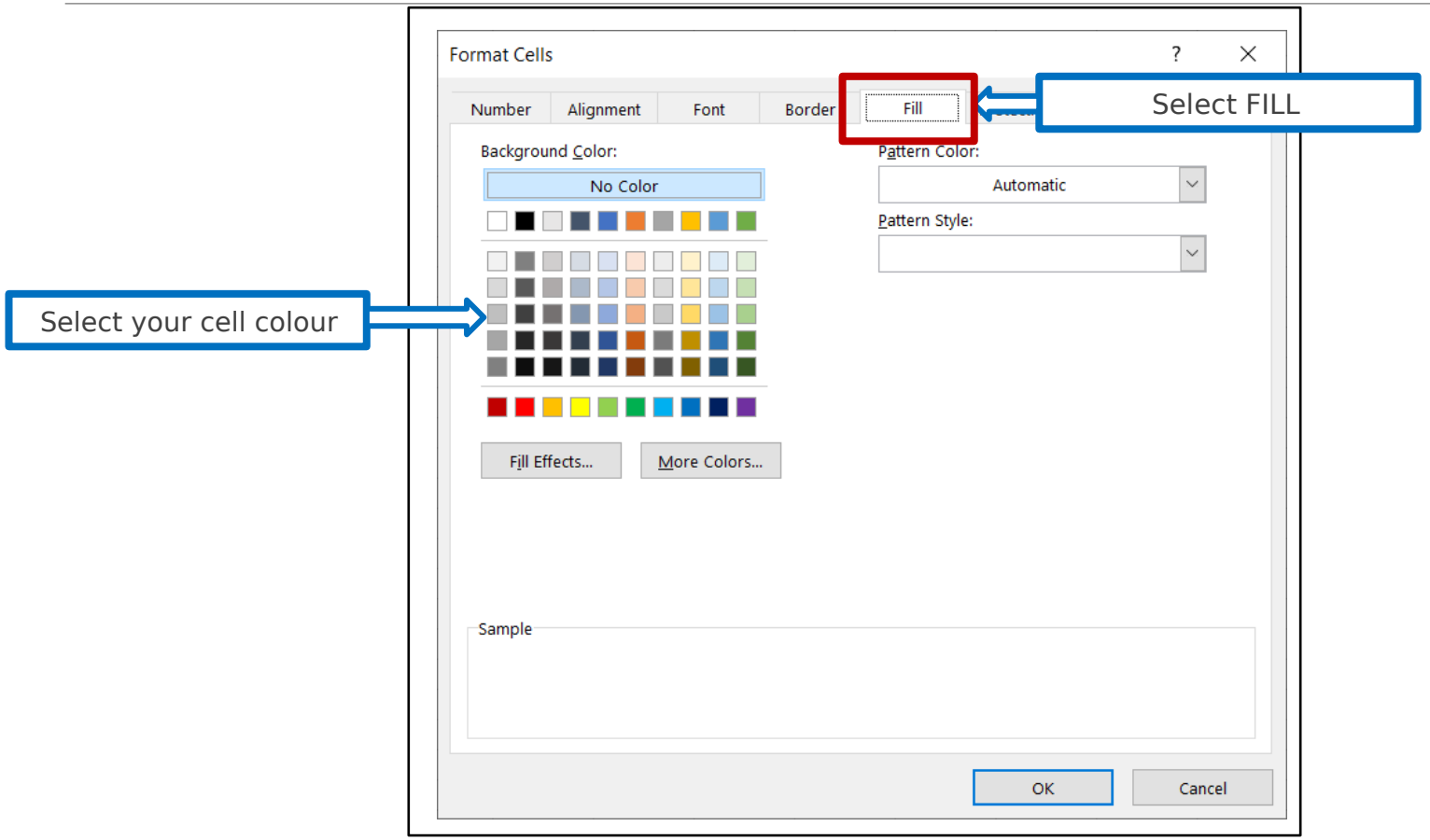
Cell Shading – Using the Format Dialog



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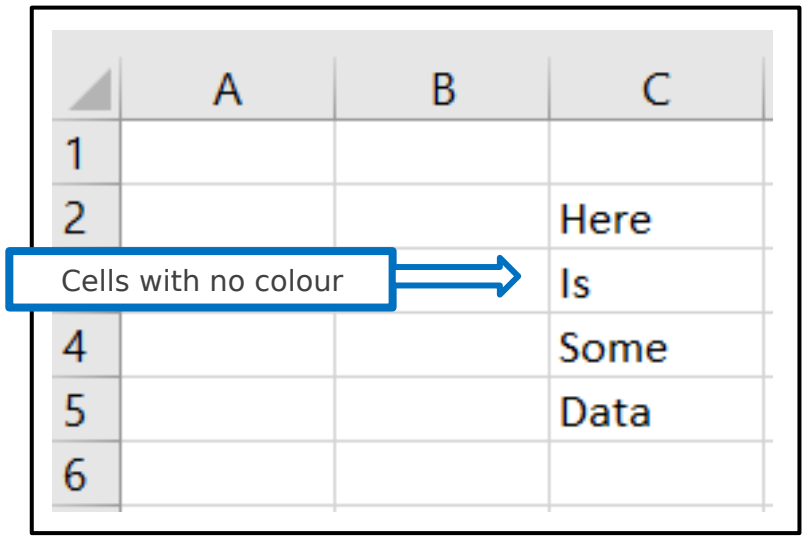
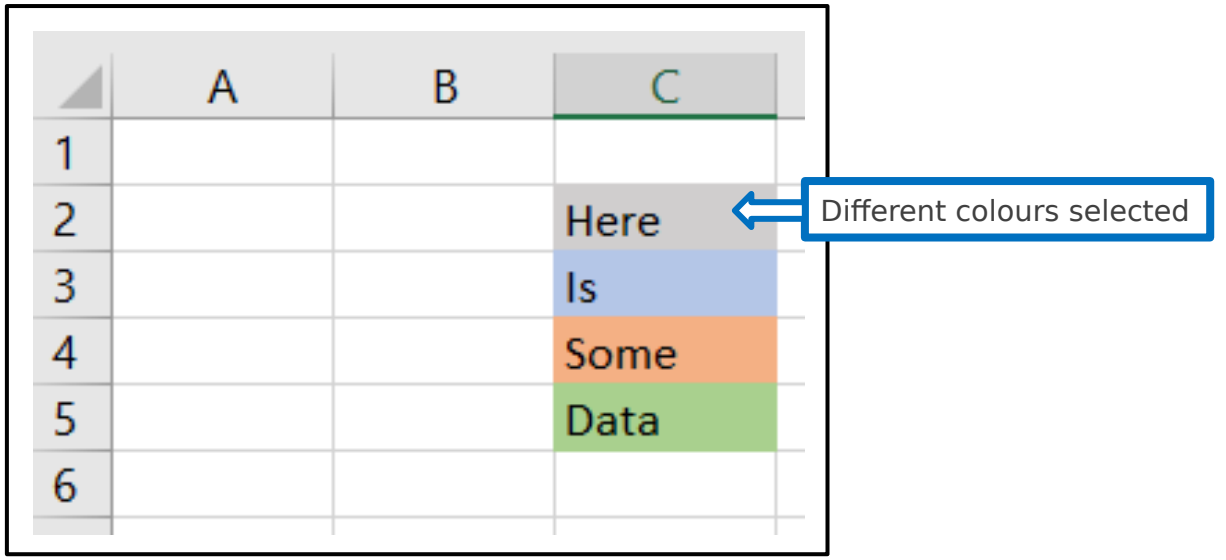
Cell Shading

BEFORE



AFTER



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Text Alignment

This is where you can arrange the location of text within a cell.

This is useful for general formatting.

It can also be useful for aligning text close to the source of data input.

You can also make data wrap around, or merge cells.

Select the ***ALIGNMENT*** tab on the formatting dialog or use the shortcuts on the main toolbar.

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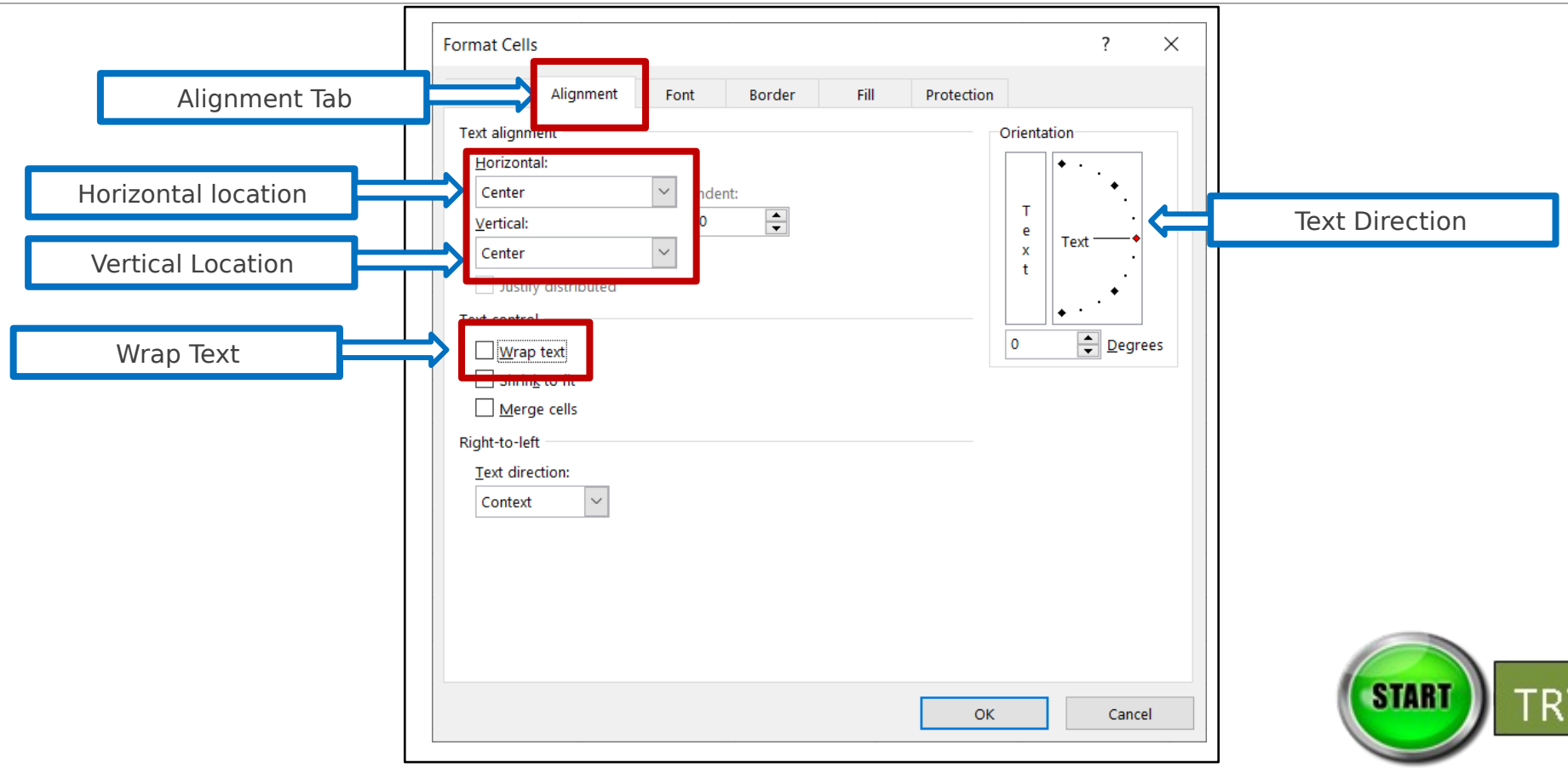
Text Alignment – Using the Format Dialog



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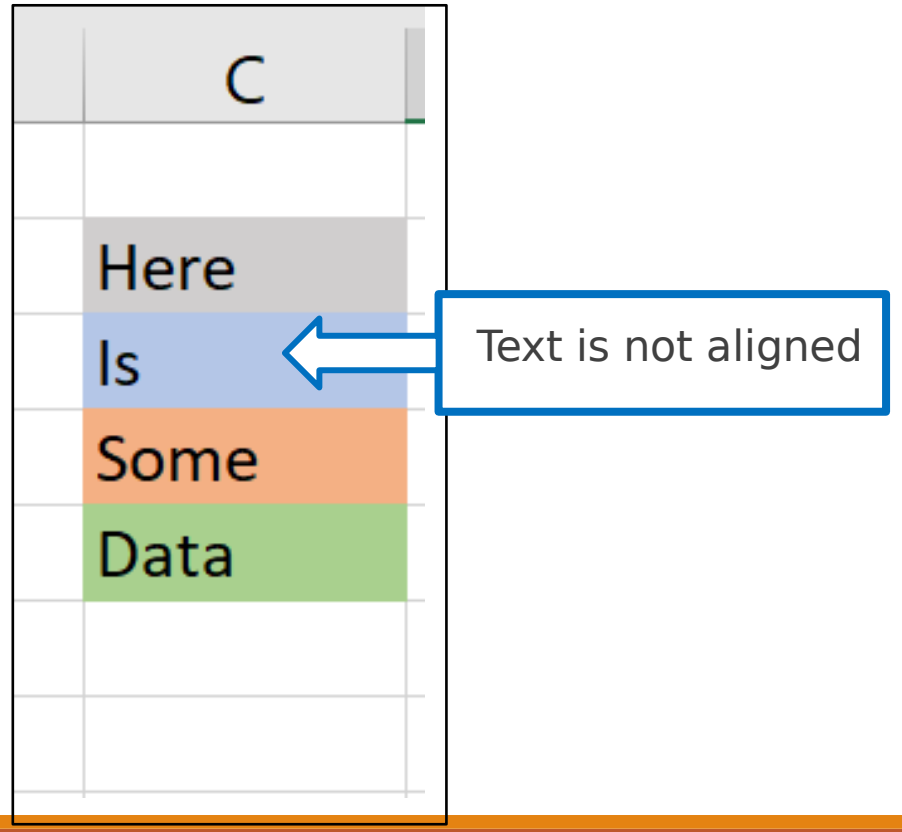
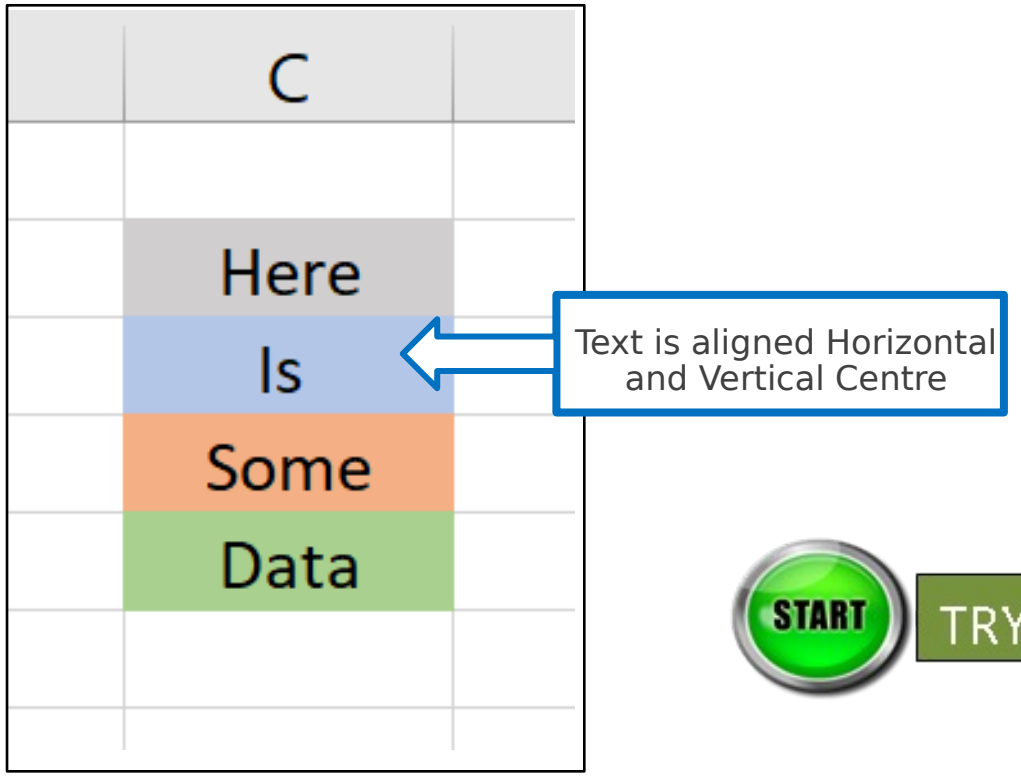
Text Alignment

BEFORE



AFTER



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Adding Borders

- This is where you can draw boxes round cells.
- It is useful for ***grouping*** areas of a spreadsheet that have ***functions in common***.
- It can be used to indicate areas of data input and output.
- Select ***BORDER*** on the formatting options dialog box or use the shortcuts on the main toolbar.
- You can load a prebuilt border type.
- Or you can have a different border for each part of a cell.

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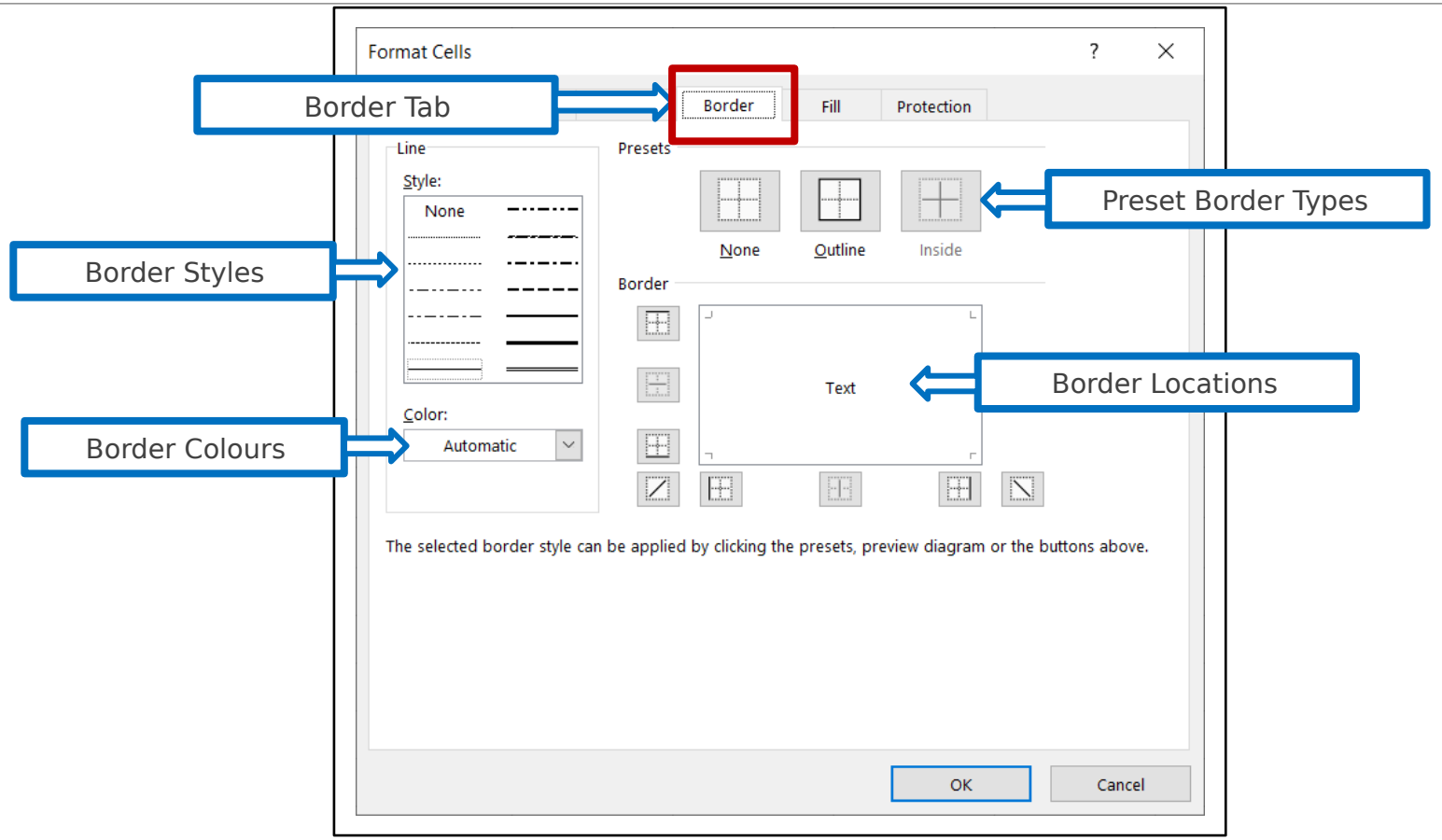
Adding Borders - Using the Format Dialog



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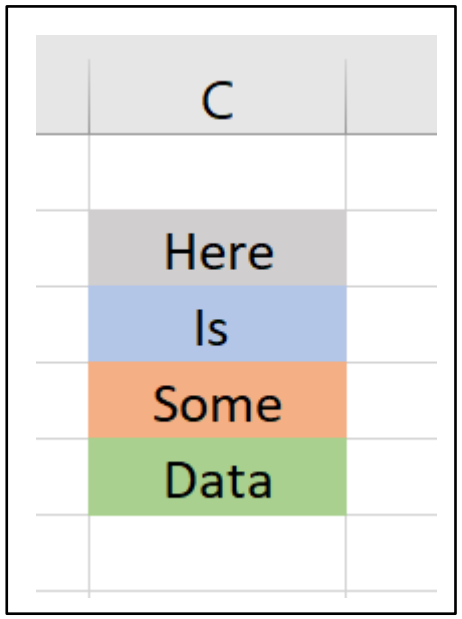
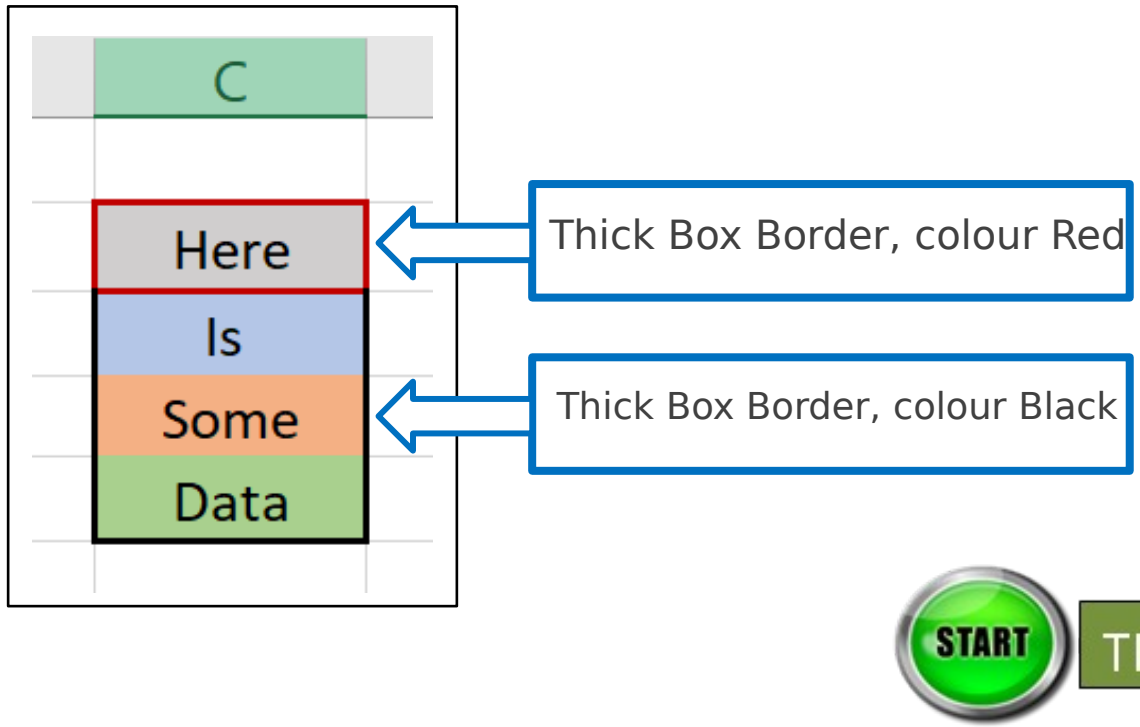
Adding Borders

BEFORE



AFTER



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Text Formatting

This is where you can change the font style of each cell.

It is useful for ***grouping*** areas of a spreadsheet that have functions in common.

It can be used to indicate areas of data ***input*** and ***output***.

Select ***FONT*** on the formatting options dialog box or use the shortcuts on the main toolbar.

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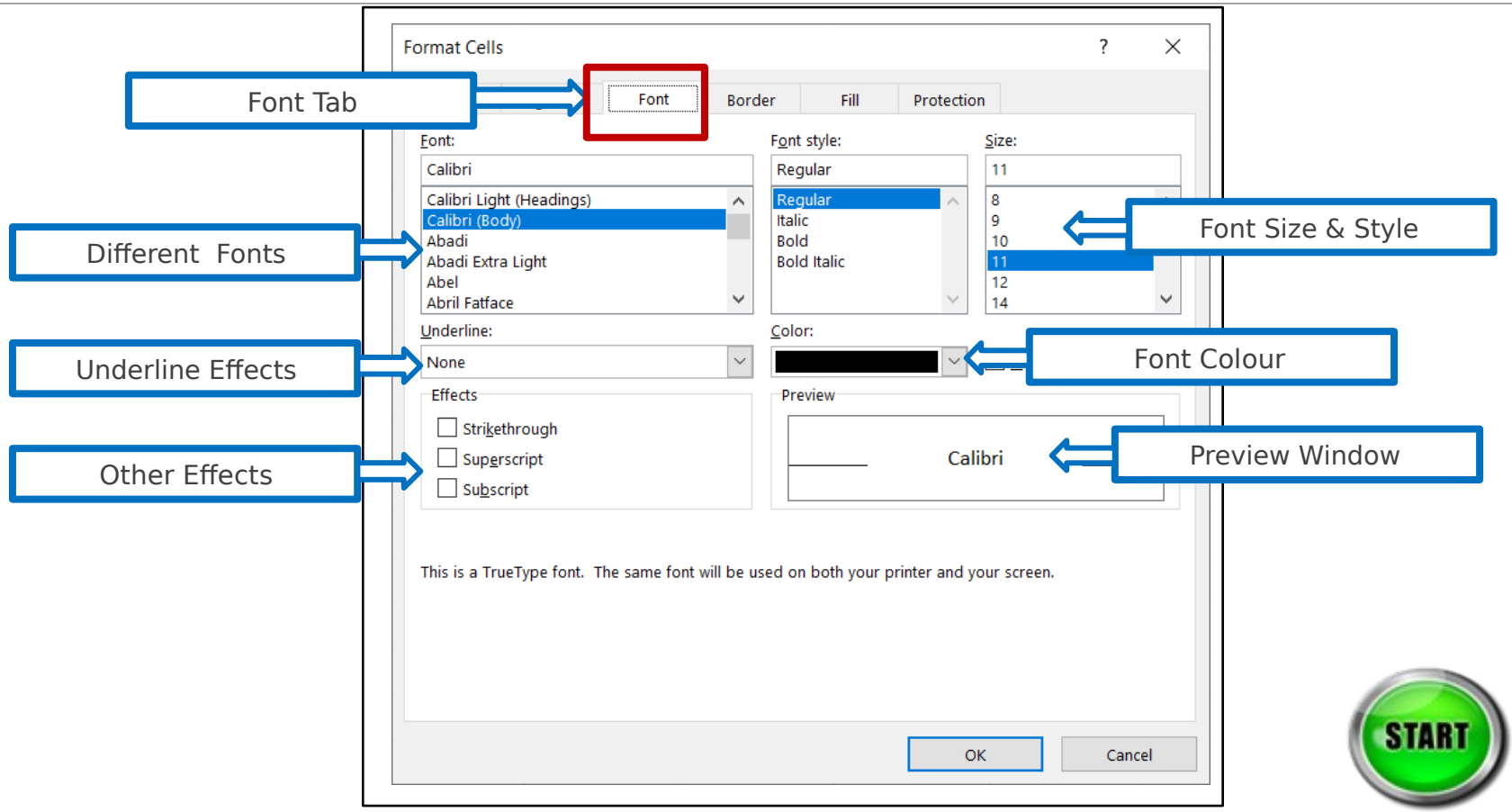
Text Formatting – Using the Format Dialog



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Formatting Data - Complete Process

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Class Tasks A2.1 – Formatting Data

Carry out the tasks in your worksheet.

For each task, complete the checklist given to you.

Check your answers in against the model answer.

Time allowed: 15 minutes

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Spreadsheet Technique Checklist

Am I able to…			
Enter Data into a spreadsheet?		Change the number of decimal places?	
Change the colour of cells?		Use the main menu shortcuts?	
Change the font size and type?		Use for format cell dialog box?	
Change font style e.g. bold, italic?		Make cells wider and taller?	
Change font colour?		Merge cells?	
Change text alignment?		Apply conditional formatting to a single cell?	
Add borders to cells?		Apply conditional formatting to a row of cells?	
Change border colour?		Apply several conditional formatting rules to a worksheet?	
Format numbers e.g. Date, Percent, Currency?			

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Self-Check: Lesson Review

- Do I understand what formatting means?
- Can I explain why formatting is used?
- Can I use the range of simple formatting techniques?
- Do I understand what conditional formatting is?
- Can I create one or more formatting rules for a spreadsheet?

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Further Reading

Websites

Videos

Textbook: pp283 – 284 & pp321-324

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